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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,010	10/28/2003	Yuzo Hioki	244582US3	3721

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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT PAPER NUMBER

3618

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,010	<b>Applicant(s)</b> HIOKI, YUZO	
	<b>Examiner</b> Frank Vanaman	<b>Art Unit</b> 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 18, 2006 has been entered.

### **Status of Application**

2. Applicant's amendment, filed May 18, 2006, has been entered in the application. Claims 1-7 remain pending.

### **Claim Rejections - 35 USC § 103**

3. The portions of 35 USC §103 relied upon herein can be found cited in a previous office action.

4. Claims 1, 2 and 5-7 are rejected as under 35 USC 103 (a) as being unpatentable over Hayashi (US 6,655,483, cited previously) in view of Reese (US 4,821,827). Hayashi teaches a motor driven vehicle having a driver's seat (10), a lateral pair of front wheels (2), a lateral pair of rear wheels (3), the rear wheels being connected to a rear wheel axle (not referenced, shown between rear wheels 3) which extends on either side of a case (on the axle, figure 1) which is positioned to one lateral side (rightward) of the vehicle, the wheels driven by a motor (12) positioned towards another lateral side (leftward) of the vehicle, the vehicle further including a battery unit having a plurality of batteries arranged side-by-side (see figure 1) in a longitudinal direction, and being positioned at a central location thereon; the vehicle further including a controller (13) for controlling current from the battery to the motor, the elements being arranged to fall within a boundary delimited by the inside borders of the wheels (2, 3), and forwardly of the rear axle, and rearwardly of the forward axle; the vehicle further including a charger (14) positioned above the battery unit as seen in elevation.

The reference to Hayashi fails to explicitly teach the case connecting the motor with the rear axle as being a gear case. Inasmuch as gearing is a very old and well known means for transferring drive force, it would have been obvious to one of ordinary

skill in the art at the time of the invention to provide the case already taught by Hayashi with a gear set (e.g., rather than a chain drive) for the purpose of providing a long lived transmission means for transmitting torque from the motor to the wheels.

Hayashi fails to teach the case as being supported on the vehicle via a shock absorber. Reese teaches an exceptionally old and well known arrangement for supporting a small motor/drive train (15, 16, 17, etc.) on a vehicle frame (36, 41) wherein a motor and drive train gear case (16) are mounted to the frame via a shock absorber (at least 25, 26, 27; 28; 20-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a shock absorber as taught by Reese to mount the motor and case taught by Hayashi so as to provide the motor and case in a suspended manner as taught by Reese so as to improve rider comfort and vehicle stability when the vehicle traverses discontinuities in its traveling path.

As regards claim 6, the reference to Hayashi as modified by Reese fails to explicitly teach the tires as being wide width and low-pressure balloon tires. In that such tires are very well known for applications involving the traversal of soft ground, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vehicle of Hayashi with low-pressure wide width tires to facilitate motion over soft ground surfaces.

As regards the specific recitation concerning "rough road driving" the examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Reese and Lamoreaux (US 4,655,307). The reference to Hayashi is discussed above and fails to teach a protection member located beneath the gear case. Lamoreaux teaches a protective cover (37) positioned so as to be beneath the

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operating components of a four-wheel, rough road vehicle (figures 1-3). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a protection member as taught by Lamoreaux under the vehicle (and thus the case) taught by Hayashi, for the purpose of protecting the vehicle components from damage under use.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi in view of Reese and Scaduto (US 5,686,818). The reference to Hayashi is discussed above and fails to teach the provision of the controller arranged at a front of the vehicle. Scaduto teaches a vehicle wherein a plurality of batteries (1) are arranged in a longitudinal progression (figure 1) with a controller (2) at a forward end thereof. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a forward-located controller to the vehicle taught by Hayashi, as suggested by Scaduto, for the purpose of locating the controller in a position which allows easy access for repair, and maintaining short power line lengths for the DC component (i.e., to/from the batteries) of the supply structure.

#### **Response to Comments**

7. Applicant's comments have been carefully considered. Applicant's comments concerning the supposed chain drive of Hayashi are noted but do not appear to be directed to the reference itself inasmuch as Hayashi is silent on the contents of the case connecting the motor with the wheel drive. Applicant has asserted that it appears as though the examiner has used Official Notice. The assertion is not correct. Had Official Notice been taken, such would have been clearly and explicitly set forth in the office action. A perusal of the previous office action shows no evidence of a taking of Official Notice. If applicant disagrees, then applicant should clearly set forth evidence to support the assertion, *and as part of a complete response to this office action, applicant is explicitly invited to do so*. The examiner has not asserted that it would have been obvious to replace a chain drive with a gear case, rather the examiner has set forth in the rejection that, in view of Hayashi's silence on the precise contents of the case, it would have been obvious to use a gear drive rather than a chain drive, for example, for reasons which are set forth in the rejection.

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The examiner expresses some substantial surprise that applicant appears to be so unfamiliar with vehicle drive technology as to believe that the provision of a gear case is not old and well known. If applicant indeed believes that it is not old and well known to use a gear case in a drive environment, then applicant is hereby explicitly invited to state this unequivocally in the record.

Reese, for example, relied upon above specifically for the provision of a case and motor on a shock absorbing suspension also teaches that it is well known to provide a gear case (16) itself, though since this provision is indeed notoriously well known, Reese is not explicitly relied upon for such a teaching. The prior art is replete with examples of gear trains and gear cases used in vehicle environments. Note, for example, the reference to Irikura (US 5,755,098) which teaches the use of a gear train, and additionally teaches that such a provision may be replaced with a chain drive.

#### **Conclusion**

8. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

**F. VANAMAN**  
**Primary Examiner**  
**Art Unit 3618**



6/12/08